

ABSTRACT OF THE INVENTION

An electrode includes a conductive adhesive layer and a conductive foil layer having a void therein. One such electrode may be mounted in conjunction with another electrode upon a release liner having one or more openings therein to facilitate electrical signal exchange between electrodes. A release liner may include a moisture permeable and/or moisture absorbent membrane. A release liner may alternatively include a conductive backing layer. A release liner may also include an insulating swatch covering an opening. A release liner may be implemented as a foldable sheet, such that multiple electrodes may be mounted upon the same side of the foldable sheet. A medical device to which the mounted electrodes are coupled may characterize the electrical path between the electrodes. The medical device may perform a variety of electrical measurements, including real and/or complex impedance measurements. Based upon one or more measurements, the medical device may provide an indication of electrode condition, fitness for use, and/or an estimated remaining lifetime. An electrode condition indicator, which may form a portion of the medical device, may generate, present, or display electrode condition and/or estimated remaining lifetime information via a visual metaphor, such as a fuel gauge.